CLAIMS:

1. A process for controlling flow of solid catalyst particles in a gas-solids reactor, the process comprising the steps of:

   a) flowing solid catalyst particles between opposing conductive surfaces in a gas-solids reactor; and

   b) controlling electrical charges between the flowing solid catalyst particles and the opposing conductive surfaces in the gas-solids reactor to move the solid catalyst particles away from at least one of the opposing conductive surfaces.

2. The process of claim 1, wherein the electrical charges are controlled by grounding the opposing conductive surfaces.

3. The process of claim 1, wherein the electrical charges are controlled by applying a voltage to one of the opposing conductive surfaces.

4. The process of claim 1, wherein the voltage applied is at least 10 KV.

5. The process of claim 4, wherein the voltage applied is at least 25 KV.

6. The process of claim 5, wherein the voltage applied is at least 50 KV.

7. The process of claim 1, wherein a gas is flowed with the solid catalyst particles.

8. The process of claim 7, wherein the gas is a chemical reactant.

9. The process of claim 8, wherein the chemical reactant is an oxygenate.

10. The process of claim 9, wherein the oxygenate is methanol.

11. The process of claim 1, wherein the solid catalyst particles are selected from the group consisting of molecular sieve catalyst particles, maleic anhydride forming catalyst particles, and acrylonitrile and methacrylonitrile forming catalyst particles.

12. The process of claim 11, wherein the solid catalyst particles are molecular sieve catalyst particles.

13. The process of claim 12, wherein the molecular sieve catalyst particles are silicoaluminophosphate molecular sieve catalyst particles.

14. The process of claim 7, wherein the catalyst particles and gas are flowed at a weight hourly space velocity of 2 hr^{-1} to 5000 hr^{-1}.

15. The process of claim 7, wherein the catalyst particles and gas are flowed at a gas superficial velocity of at least 2 meters per second.

16. The process of claim 7, wherein the catalyst particles and gas are flowed at a catalyst to gas mass ratio of from 5:1 to 75:1.

17. A gas-solids reactor system for controlling electrical charges between flowing solid particles and conductive surfaces in a gas-solids reactor, the system comprising:

a) a gas-solids reactor having a wall with an inner surface, at least a portion of the inner surface being made of conducting material;

b) a conductive surface internal to the inner surface of the gas-solids reactor wall; and

c) an electric potential inducer in connection with the conductive surface portion of the gas-solids reactor wall and the conductive surface internal to the inner surface of the gas-solids reactor wall, wherein the inducer controls electrical charges between solids flowing through the reactor, the conducting material of the inner surface of the gas-solids

reactor wall, and the conductive surface internal to the inner surface of the gas-solids reactor wall.

18. The gas-solids reactor system of claim 17, wherein the electric potential inducer is a ground connected to each of the conductive surfaces.

19. The gas-solids reactor system of claim 18, wherein the ground is a common ground connected to each of the conductive surfaces.

20. The gas-solids reactor system of claim 17, wherein the electric potential inducer supplies electric current to the conducting material of the inner surface of the gas-solids reactor wall or the conductive surface internal to the inner surface of the gas-solids reactor wall.

21. The gas-solids reactor system of claim 17, wherein the gas-solids reactor further comprises a redirection conduit, and wherein said wall with an inner surface is a wall with an inner surface in the redirection conduit.

22. A process for controlling flow of solid catalyst particles in a gas-solids reactor, the process comprising the steps of:

a) providing a gas-solids reactor having a wall with an inner surface, at least a portion of the inner surface being made of conducting material;

b) providing a conductive surface internal to the inner surface of the gas-solids reactor wall;

c) flowing solid catalyst particles between the conducting material of the inner surface of the of the gas-solids reactor wall and the conductive surface internal to the inner surface of the gas-solids reactor wall; and

d) controlling electrical charges between the flowing catalyst, the conducting material of the inner surface of the of the gas-solids reactor wall, and the conductive surface internal to the inner surface of the gas-solids reactor wall to move the solid catalyst particles away from the conducting material of the inner surface of the of the gas-solids reactor

wall or the conductive surface internal to the inner surface of the gas-solids reactor wall.

23. The process of claim 22, wherein the electrical charges between the flowing catalyst, the conducting material of the inner surface of the of the gas-solids reactor wall, and the conductive surface internal to the inner surface of the gas-solids reactor wall are controlled by grounding the conducting material of the inner surface of the gas-solids reactor wall and the conductive surface internal to the inner surface of the gas-solids reactor wall to one another.

24. The process of claim 22, wherein the electrical charges between the flowing catalyst, the conducting material of the inner surface of the of the gas-solids reactor wall, and the conductive surface internal to the inner surface of the gas-solids reactor wall are controlled by by applying a voltage to the conducting material of the inner surface of the gas-solids reactor wall or the conductive surface internal to the inner surface of the gas-solids reactor wall.

25. The process of claim 22, wherein the voltage applied is at least 10 KV.

26. The process of claim 25, wherein the voltage applied is at least 25 KV.

27. The process of claim 26, wherein the voltage applied is at least 50 KV.

28. The process of claim 22, wherein a gas is flowed with the catalyst particles.

29. The process of claim 28, wherein the gas is a chemical reactant.

30. The process of claim 29, wherein the chemical reactant is an oxygenate.

31. The process of claim 29, wherein the oxygenate is methanol.

32. The process of claim 22, wherein the solid catalyst particles are selected from the group consisting of molecular sieve catalyst particles, maleic anhydride forming catalyst particles, and acrylonitrile and methacrylonitrile forming catalyst particles.

33. The process of claim 32, wherein the catalyst particles are molecular sieve catalyst particles.

34. The process of claim 33, wherein the molecular sieve catalyst particles are silicoaluminophosphate molecular sieve catalyst particles.

35. The process of claim 28, wherein the catalyst particles and gas are flowed at a weight hourly space velocity of 2 hr^{-1} to 5000 hr^{-1}.

36. The process of claim 28, wherein the catalyst particles and gas are flowed at a gas superficial velocity of at least 2 meters per second.

37. The process of claim 28, wherein the catalyst particles and gas are flowed at a catalyst to gas mass ratio of from 5:1 to 75:1.

38. The process of claim 22, wherein the gas-solids reactor further comprises a redirection conduit, and wherein said wall with an inner surface is a wall with an inner surface in the redirection conduit.